



F R I E D R I C H

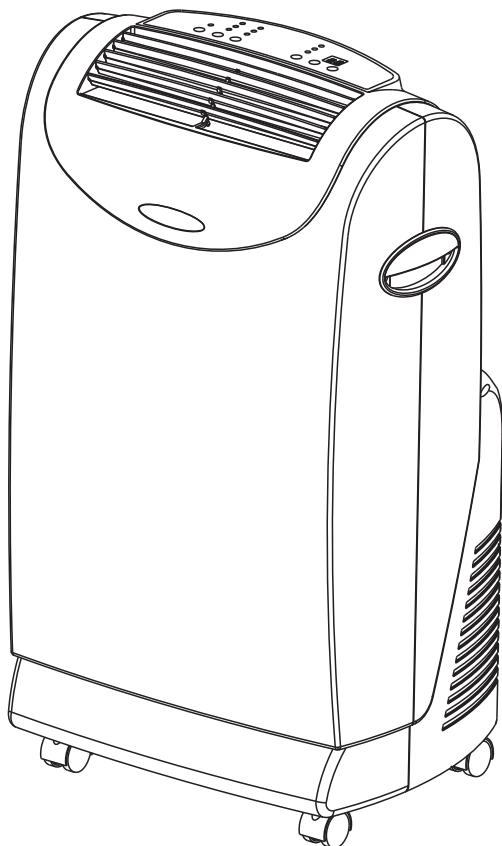
Service & Parts Manual

Portable Air Conditioner

Models P09B and P12B

(Serial Number Beginning with an "A")

Models P09B-A and P12B-A



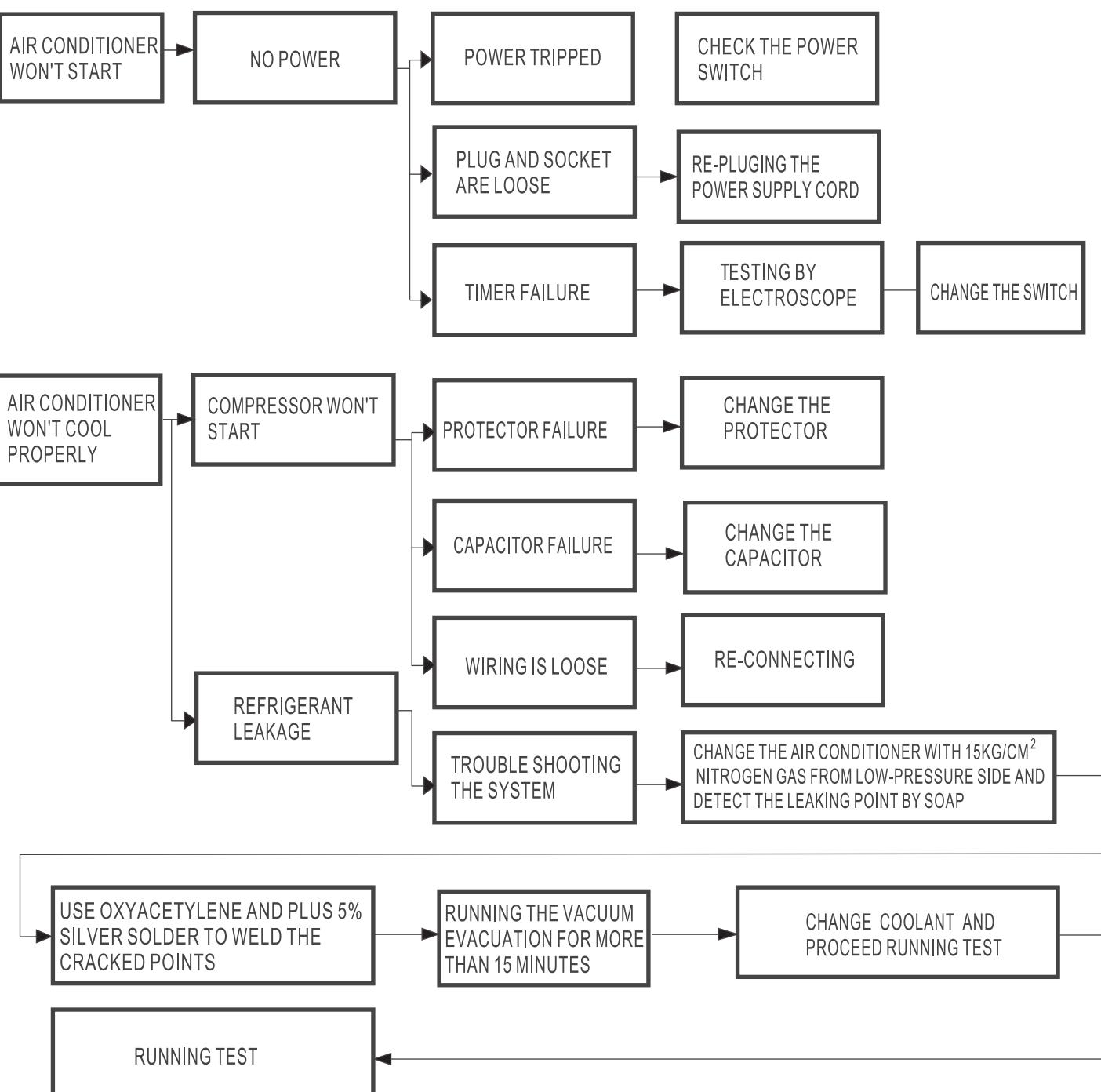
Service Points and Flow Chart for Inspection and Repair of Unit	1
Troubleshooting	2
Appearance and Control Panel	3-4
Remote Control	5
Technical Specifications	6-7
Refrigerator System and Schematic Wiring Diagrams	8
Exploded View	9
Parts List	10
Warranty	11

IMPORTANT POINTS ON SERVICE OPERATING SAFETY

Please follow these instructions carefully:

- Unplug the unit to avoid any danger from electric shock before disassembling the unit for repair.
- If there is any sound of the refrigerant circulating when in operation, avoid touching the cooling coils.
- If you need to perform any welding or soldering, be sure you are in a well ventilated area.
- Only a qualified professional should perform any welding on the unit.
- When repairing the unit, the specifications listed in this manual must be strictly adhered to when replacing any components.
- When replacing any electrical components they should be factory approved units.
- Be sure that any electrical components are properly wired and in place.

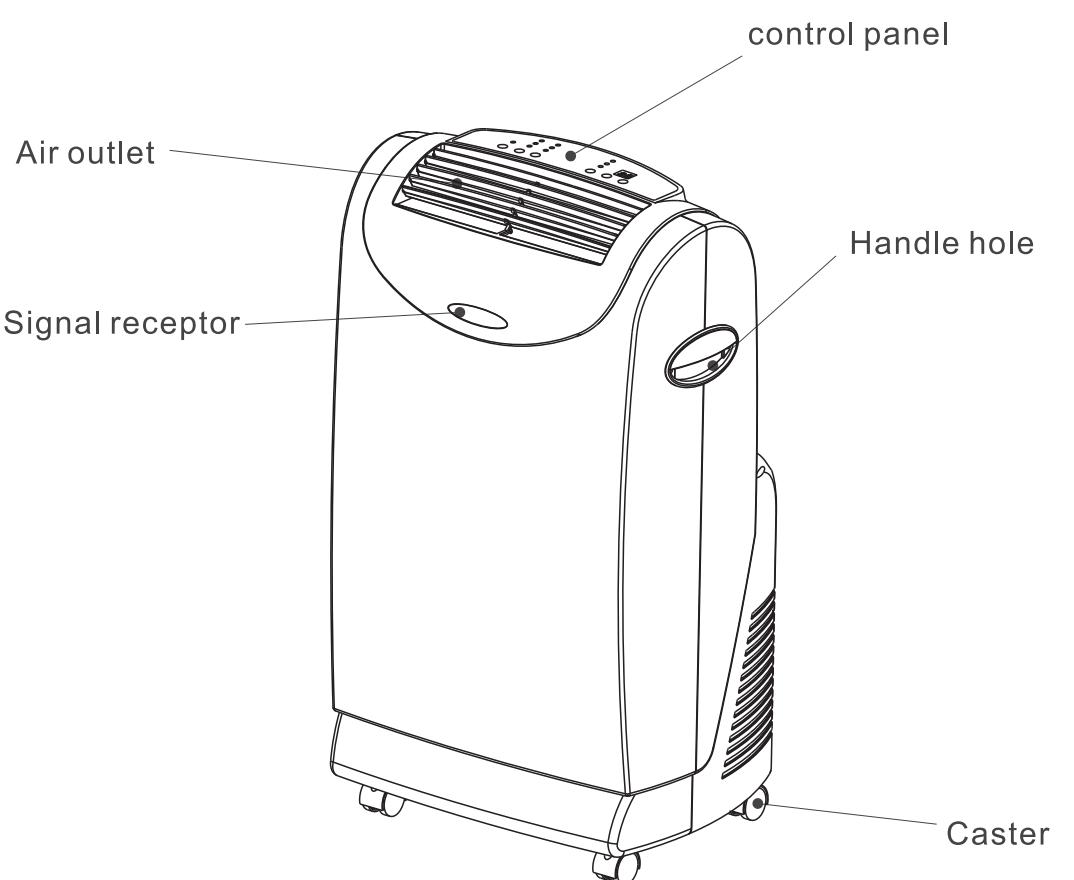
FLOW CHART FOR INSPECTING AND REPAIRING THE UNIT



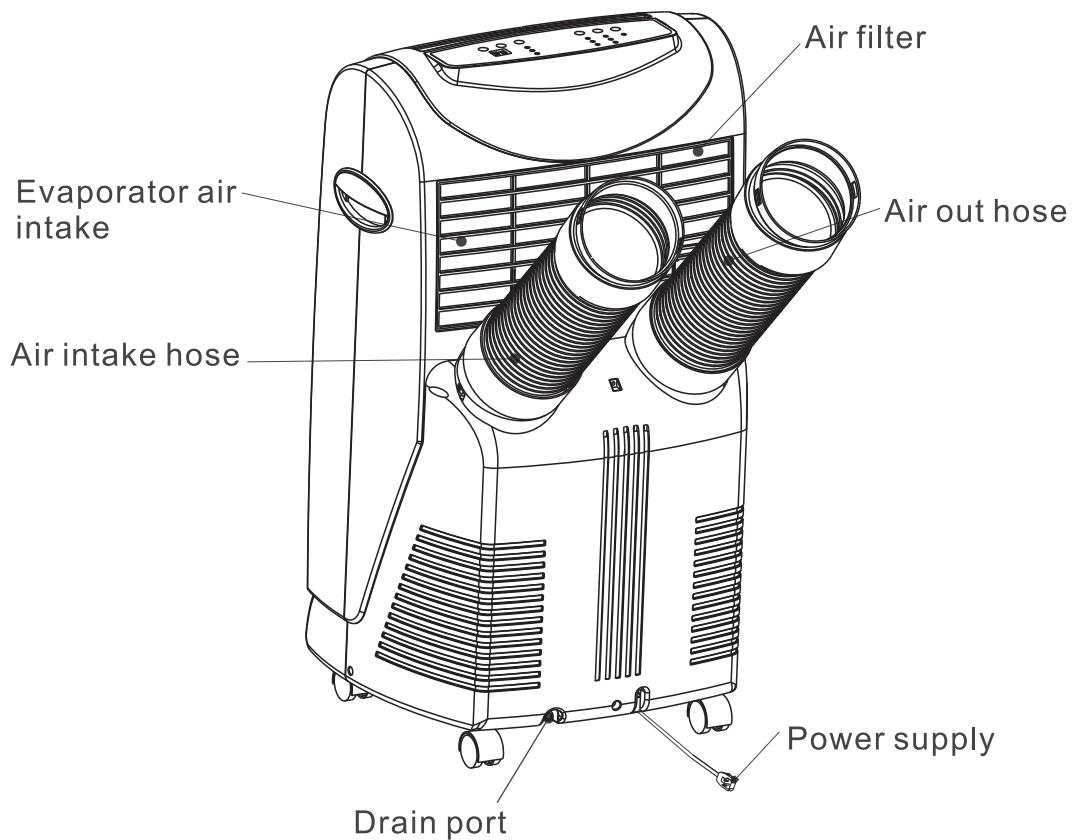
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDIES
The air conditioner doesn't work	<ul style="list-style-type: none"> -There is a power failure -The plug is not connected -The timer is unable to work -The main switch has not been pressed 	<ul style="list-style-type: none"> -Wait for the power return -Connect the plug -Provide repairment -Press the main switch
The air conditioner works for short period only	<ul style="list-style-type: none"> -The set temperature is too close to the room's temperature -There is something blocking the suction vent on the back of condenser -The fan on the condenser is blocked 	<ul style="list-style-type: none"> -Decrease the setting temperature -Remove any obstacles -Provide repairment
The air conditioner switches are off constantly	<ul style="list-style-type: none"> -Malfunction 	<ul style="list-style-type: none"> -Turn off the appliance remove the plug and contact the service center
The air conditioner works but it does not cool the room	<ul style="list-style-type: none"> -There is a window opened -There is a source of heat operating in the room (burner, lamp, etc.), or the room is crowded -The air filter is clogged -The capacity of the air conditioner is not suitable for the conditions or size of the room -The evaporator is frozen 	<ul style="list-style-type: none"> -Close the window -Remove/switch off the source of heat -Decrease the set temperature -Clean the filter -Clean the air filter -Change the purifier filter, if necessary -Do not make the appliance operating at too low temperature(below 22°C)
The appliance is very noisy and vibrates violently	<ul style="list-style-type: none"> -The compressor blocking device has been loosen or the copper pipe is getting in touch with the body of the set 	<ul style="list-style-type: none"> -Provide repairment
When LED of unit shows E1	<ul style="list-style-type: none"> -There might be a broken or short circuit on ambient temperature sensor. 	<ul style="list-style-type: none"> -Please check if it is sensor's problem. If not, contact manufacturer for replacing the PCB.
When LED of unit shows E2	<ul style="list-style-type: none"> -There might be a broken or short circuit on brass temperature sensor (only applicable for cool/heat unit). 	<ul style="list-style-type: none"> -Please check if it is sensor's problem. If not, contact manufacturer for replacing the PCB.

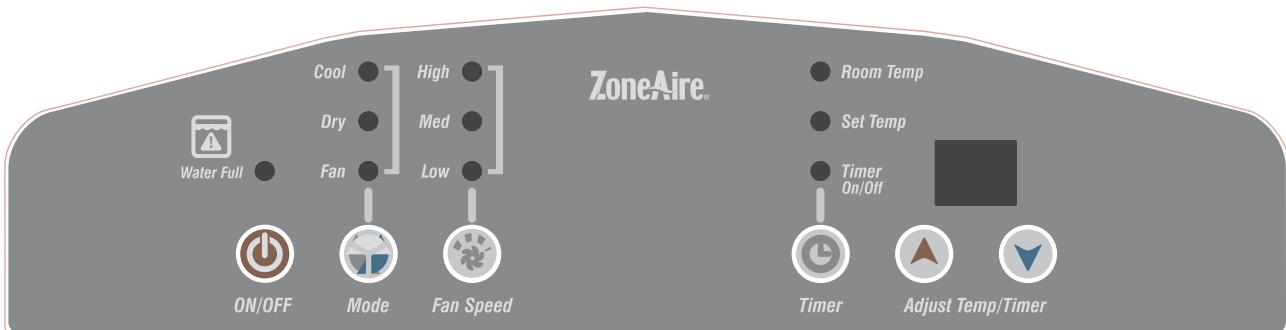
APPEARANCE



APPEARANCE



Control panel



Power Control

The power control turns the unit on and off.

Warning Light

Condensed water may accumulate in the unit. If the internal tank becomes full, the Warning Light will shine and the unit will not operate until the unit has been drained.

Mode Control

The Mode Control has 3 settings:

● Cool ● Dehumidify ● Fan

The settings are adjusted with Mode Control button. A light will indicate which setting is currently being used.

● Cooling Mode

When cool mode is selected, the indicator light will shine blue. During the cooling mode the air is cooled and hot air is exhausted to the outside through the exhaust tube. Adjust fan speed and air temperature to suit your desired comfort level.

Note : The air exchange hoses must vent outside the room when using cool mode.

● Dehumidify Mode

When dehumidify mode is selected, the indicator light will shine orange. Air is dehumidified as it passes through the unit, without being in full cooling mode. If room temperature is higher than 25 degree Celsius, fan speed can be adjusted; otherwise fan speed is fixed to " Low ".

Note : If the unit is to be used as a dehumidifier, do not connect the exhaust hose let the warm air return to the room.

Continuous drainage is then necessary.

● Fan Mode

When fan mode is selected the indicator light will shine yellow. Air is circulated throughout the room with no cooling.

Note: unit does not need to be vented in Fan mode

Fan Speed Control

The Fan Speed Control has 3 settings: High, Medium, and Low.

Timer

Auto turn off :

With machine in running mode, press timer button for setting timer control. Press "▲" or "▼" to select number of hours you would like the unit to run before it automatically shuts off.

Auto turn on :

With machine in stand by mode, press timer button for setting timer control. Press "▲" or "▼" to select number of hours before the unit automatically starts running in airconditioning mode.

Note : The time is adjustable between 1~24 hours.

Temperature controls

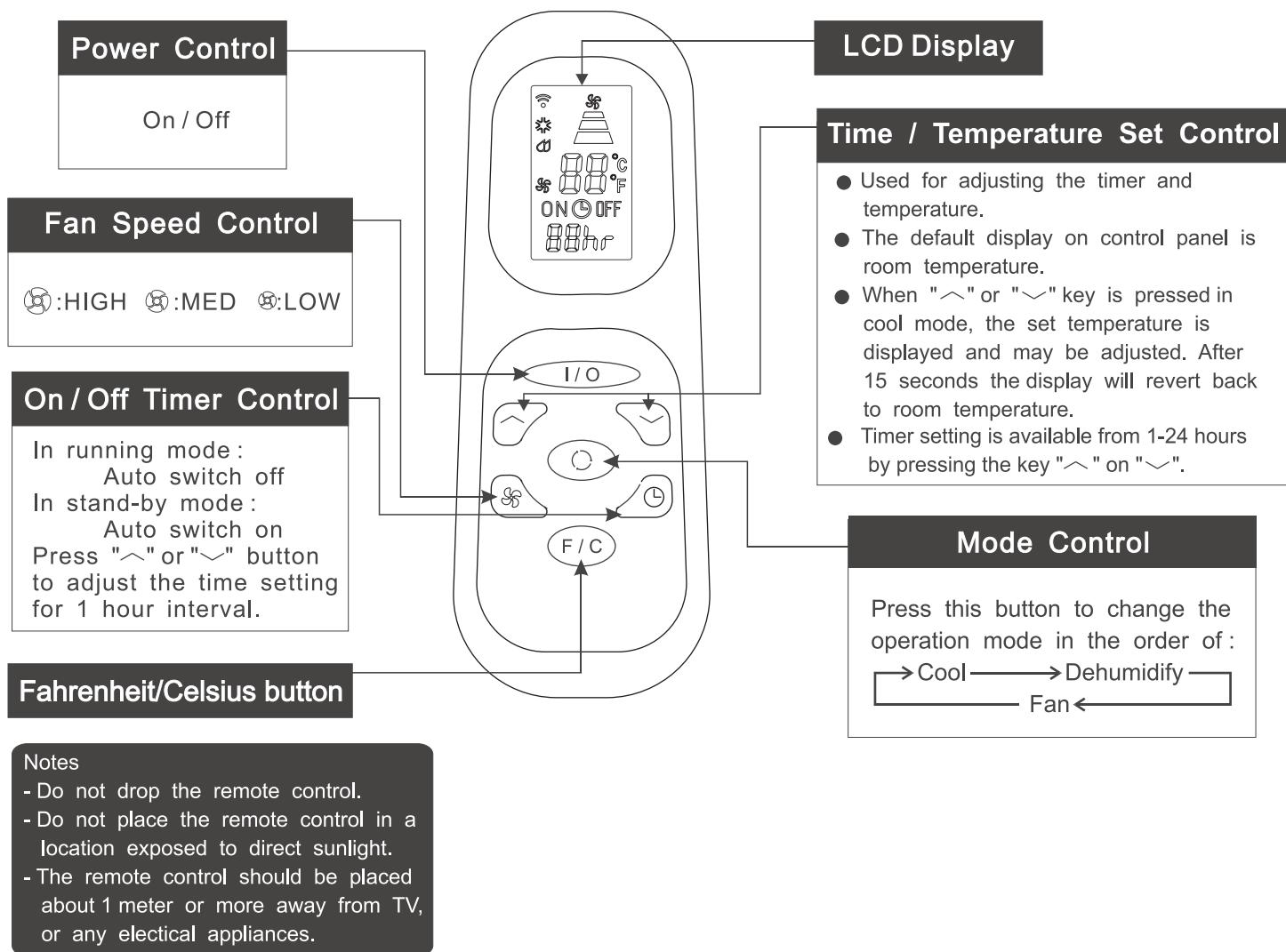
- Used for adjusting the thermostat.
- The default display is room temperature.
- In cooling mode, when "+" or "-" button is pressed, the set temperature is displayed and may be adjusted. After 15 seconds the display will revert back to room temperature. Temperature is only adjustable in cool mode.
- Note : By pressing both "▲" / "▼" buttons at the same time for more than 3 seconds, the display will toggle between Celsius and Fahrenheit.**

After switching the air conditioner off, you must wait 3 minutes before switching it back on again.

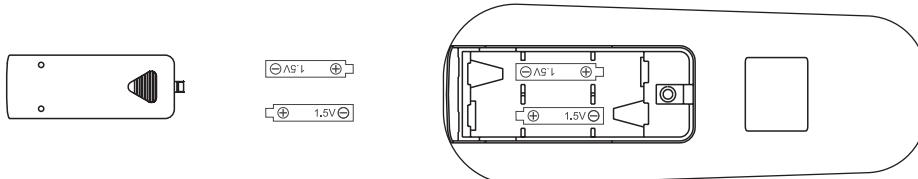
REMOTE CONTROL

Air Conditioner Remote Control

The functions work the same as your air conditioner's touch controls.
All key function can be accessed from the remote control.



Battery replacement : Remove the cover on the back of the remote control and insert the batteries with the (+) and (-) poles pointing in the proper direction.



CAUTION

Use only AAA or IEC R03 1.5V batteries.

Remove the batteries if the remote control is not used for a month or longer.

Do not attempt to recharge the supplied batteries.

All batteries should be replaced at the same time, do not mix old battery .

Do not dispose of the batteries in a fire as they may explode.

TECHNICAL SPECIFICATIONS

AIR CONDITIONER

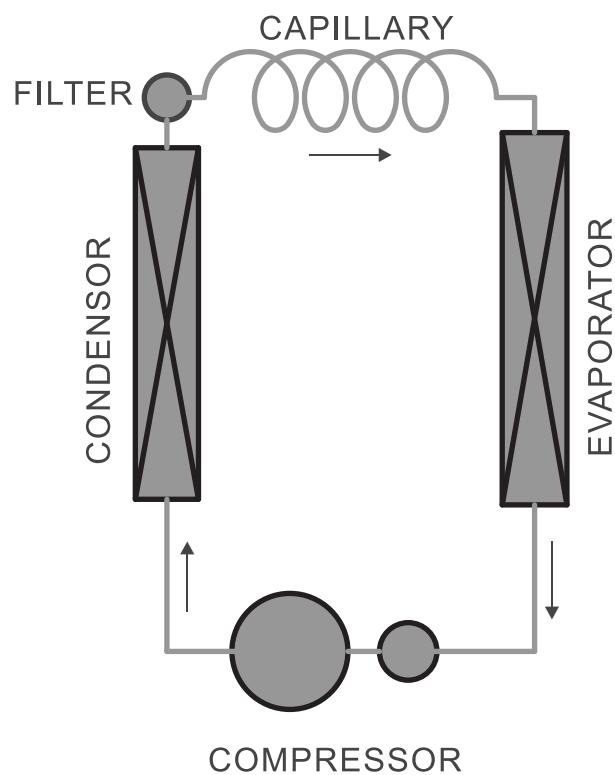
ITEM	UNIT	P09B-A
OUTER DIMENSION	INCH	19 13/25*33 31/50* 15 11/20
REFERENTIAL USING AREA	SQ. FT	2754 - 5207
RATED VOLTAGE	V/Hz	115 / 60
COOLING CAPACITY	B.T.U.	10000
DEHUMIDIFYING CAPACITY	Pints/Hr	3.8
RUNNING CURRENT	A	10.8
POWER CONSUMPTION	W	1200
INDOOR AIR VOLUME	CFM	8947
COMPRESSOR	MODEL	44N100-A2-BCAD
	INPUT POWER	W 1007
	OPERATING CYCLE	uF/V 55/300
	PROTECTOR	B470-135-241C
	LOCKED ROTOR AMPS	A 50
INDOOR MOTOR	MODEL	LS-23T3-6P
	OUTPUT POWER	W 30
	OPERATING CYCLE	uF/V 8/250
OUTDOOR MOTOR	MODEL	LS-53T1-4P
	OUTPUT POWER	W 40
	OPERATING CYCLE	uF/V 9/250
TURBINE FAN MOTOR	MODEL	WT-15T1-04
	OUTPUT POWER	W 7
CAPILLARY	INCHES	0.102 (D) X 0.055 (d) X 31.49 (L)
REFRIGERANT	R-410A/oz	23.67
WEIGHT	LBS	77

TECHNICAL SPECIFICATIONS

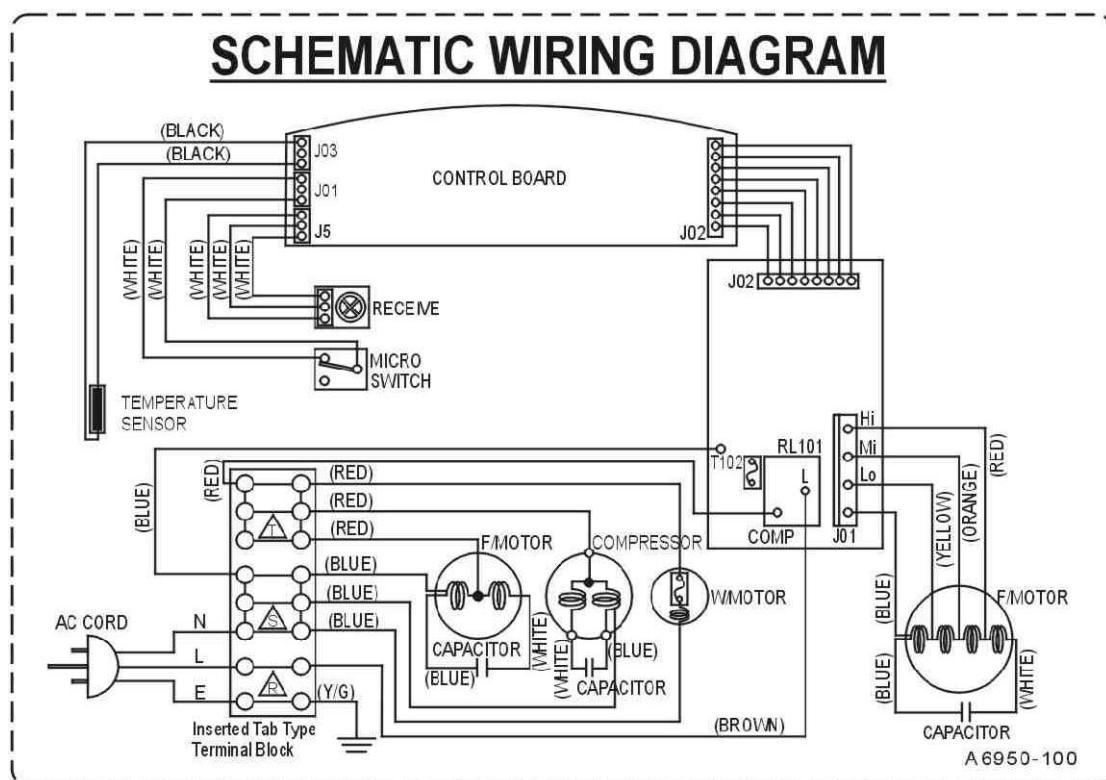
AIR CONDITIONER

ITEM	UNIT	P12B-A
OUTER DIMENSION	INCH	19 13/25*33 31/50* 15 11/20
REFERENTIAL USING AREA	SQ. FT	5207 - 9682
RATED VOLTAGE	V/Hz	115 / 60
COOLING CAPACITY	B.T.U.	12000
DEHUMIDIFYING CAPACITY	Pints/Hr	4.2
RUNNING CURRENT	A	11.5
POWER CONSUMPTION	W	1300
INDOOR AIR VOLUME	CFM	10460
COMPRESSOR	MODEL	44N110-A2-BEAD
	INPUT POWER	W 1114
	OPERATING CYCLE	uF/V 60/300
	PROTECTOR	UP3-49
	LOCKED ROTOR AMPS	A 50
INDOOR MOTOR	MODEL	LS-23T3-6P
	OUTPUT POWER	W 30
	OPERATING CYCLE	uF/V 8/250
OUTDOOR MOTOR	MODEL	LS-53T1-4P
	OUTPUT POWER	W 40
	OPERATING CYCLE	uF/V 9/250
TURBINE FAN MOTOR	MODEL	WT-15T1-04
	OUTPUT POWER	W 7
CAPILLARY	INCHES	0.102 (D) X 0.055 (d) X 39.37 (L)
REFRIGERANT	R-410A/oz	20.29
WEIGHT	LBS	77

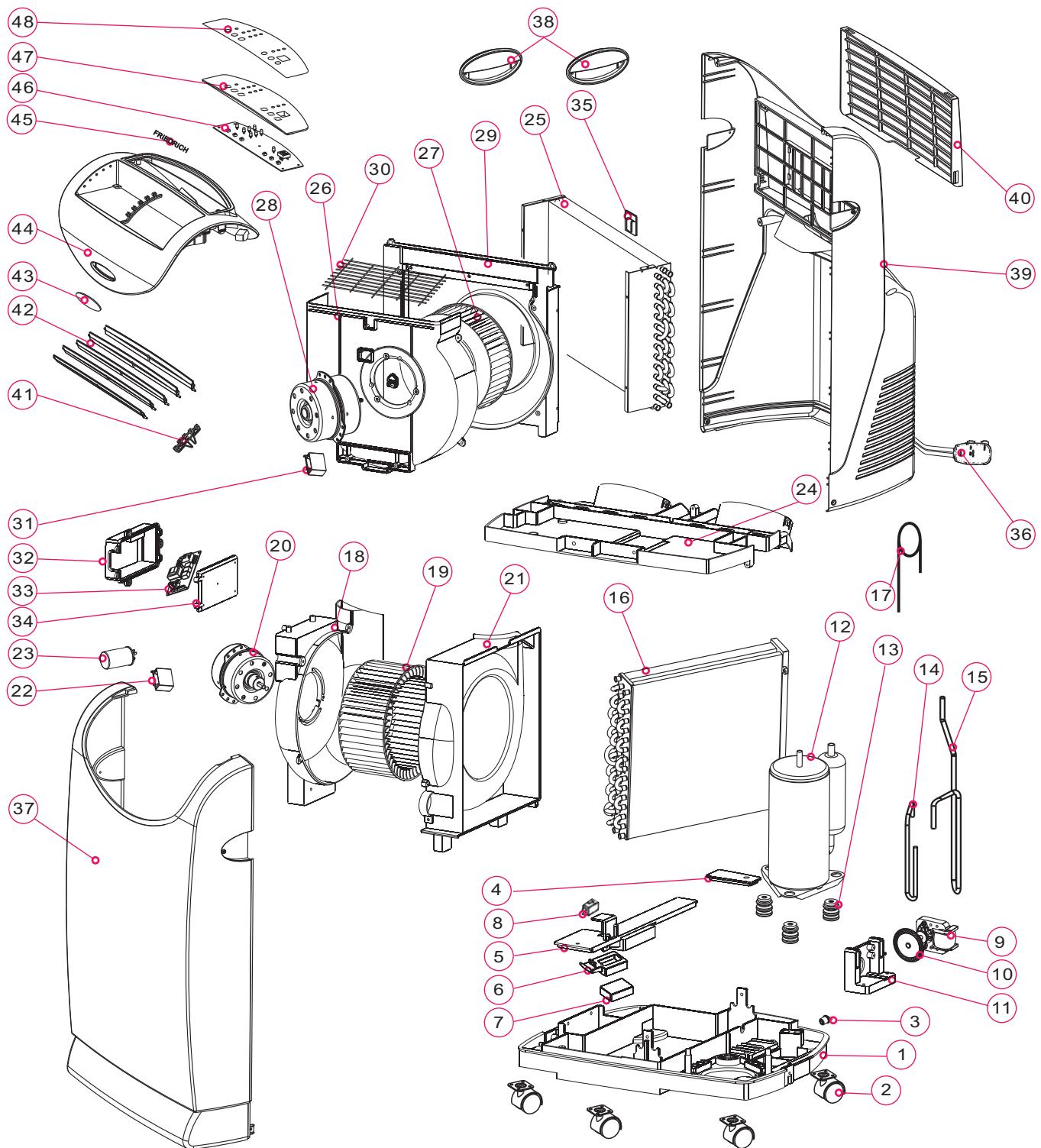
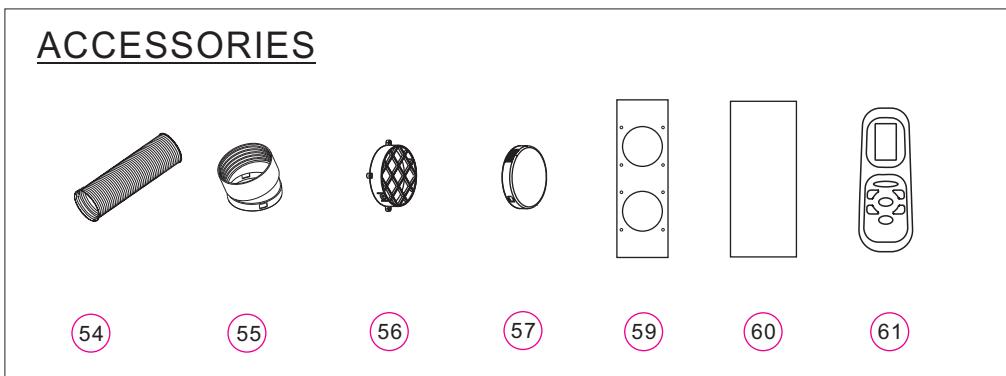
REFRIGERATOR SYSTEM DIAGRAM



SCHEMATIC WIRING DIAGRAM



ACCESSORIES



For models P09B and P12B with a serial number beginning with an "A"(ex:AKAA00001), or a model number P09B-A and P12B-A, please refer to parts list below, as there are some changes from the 2009 models.

PARTS LIST

P09B-A / P12B-A

Ref.#	PARTS NAME	QUANTITY	P09B-A	P12B-A
1	BASE PAN	1	679-040-00	679-040-00
2	TURNING WHEEL (CASTER)	4	679-040-01	679-040-01
3	DRAIN PLUG	1	679-040-02	679-040-02
4	DRAIN BUCKET COVER-B	1	679-040-03	679-040-03
5	DRAIN BUCKET COVER-A	1	679-040-04	679-040-04
6	FLOAT	1	679-040-05	679-040-05
7	FLOAT	1	679-040-06	679-040-06
8	MICRO SWITCH	1	679-041-00	679-040-07
9	SLINGER FAN MOTOR(WT-15T1-04)	1	679-040-08	679-040-08
10	SLINGER BLADE	1	679-040-09	679-040-09
11	SLINGER FIXTURE	1	679-040-10	679-040-10
13	RUBBER GROMMET	3	679-040-66	679-040-66
18	CONDENSER FAN CASING	1	679-040-17	679-040-17
19	CONDENSER BLOWER WHEEL	1	679-040-18	679-040-18
20	CONDENSER FAN MOTOR(LS-53T1-4P)	1	679-040-19	679-040-19
21	CONDENSER FAN CASING	1	679-040-20	679-040-20
22	CAPACITOR(9uF/250V FOR COND. MOTOR(20))	1	679-040-21	679-040-21
23	CAPACITOR FOR COMPRESSOR	1	679-040-73	679-040-73
24	PLATE	1	679-040-23	679-040-23
26	EVAPORATOR FAN CASING	1	679-040-25	679-040-25
27	EVAPORATOR BLOWER WHEEL	1	679-040-26	679-040-26
28	EVAPORATOR FAN MOTOR(LS-23T3-6P)	1	679-040-27	679-040-27
29	EVAPORATOR FAN CASING	1	679-040-28	679-040-28
30	SCREEN / GRATE	1	679-040-69	679-040-69
31	CAPACITOR(8uF/250V FOR EVAP. MOTOR(28))	1	679-040-30	679-040-30
32	CONTROL BOX COVER	1	679-040-31	679-040-31
33	CONTROL BOARD	1	679-040-70	679-040-70
34	CONTROL BOX FIX TURE	1	679-040-33	679-040-33
35	RETURN AIR THERMISTOR FIX TURE	1	679-040-34	679-040-34
36	POWER SUPPLY CORD COMPLETE	1	679-040-78	679-040-78
37	FRONT PANEL	1	679-040-36	679-040-36
38	HANDLE	2	679-040-37	679-040-37
39	REAR PANEL	1	679-040-38	679-040-38
40	AIR FILTER	1	679-040-39	679-040-39
41	DIRECTIONAL LOUVER CONNECTOR BAR	1	679-040-40	679-040-40
42	DIRECTIONAL LOUVER	5	679-040-41	679-040-41
43	INFRARED SENSOR COVER	1	679-040-42	679-040-42
44	DISCHARGE GRILLE	1	679-040-43	679-040-43
45	DECORATING PLATE (LOGO)	1	679-040-79	679-040-79
46	PC BOARD	1	679-040-45	679-040-45
47	CONTROL PLATE	1	679-040-46	679-040-46
48	ESCUTCHEON	1	679-040-47	679-040-47
54	HEAT EXHAUST HOSE	2	679-040-53	679-040-53
55	HEAT EXHAUST HOSE CONNECTOR	4	679-040-54	679-040-54
56	HEAT EXHAUST FIXTURE	2	679-040-55	679-040-55
57	HEAT EXHAUST COVER	2	679-040-56	679-040-56
59	WINDOW PANEL	1	679-040-58	679-040-58
60	WINDOW PANEL EXTENSION	1	679-040-59	679-040-59
61	REMOTE CONTROL	1	679-040-60	679-040-60



F R I E D R I C H

Friedrich Air Conditioning Company

P.O. Box 1540
San Antonio, TX 78295
210.357.4400
www.friedrich.com

PORTABLE AIR CONDITIONERS LIMITED WARRANTY

FIRST YEAR

ANY PART: If any part supplied by FRIEDRICH fails because of a defect in workmanship or material within twelve months from date of original purchase, FRIEDRICH will repair the product at no charge, provided the product is transported to a Friedrich Authorized Service Center for repair. ALL transportation charges are the sole responsibility of the owner. This remedy is expressly agreed to be the exclusive remedy within twelve months from the date of the original purchase.

SECOND THROUGH FIFTH YEAR

SEALED REFRIGERANT SYSTEM: If the Sealed Refrigeration System (defined for this purpose as the compressor, condenser coil, evaporator coil, reversing valve, check valve, capillary, filter drier, and all interconnecting tubing) supplied by FRIEDRICH in your Room Air Conditioner fails because of a defect in workmanship or material within sixty months from date of purchase, FRIEDRICH will pay a labor allowance and parts necessary to repair the Sealed Refrigeration System; **PROVIDED** FRIEDRICH will not pay the cost of diagnosis of the problem, removal, freight charges, and transportation of the air conditioner to and from the Service Agency, and the reinstallation charges associated with repair of the Sealed Refrigeration System. All such cost will be the sole responsibility of the owner. This remedy is expressly agreed to be the exclusive remedy within sixty months from the date of the original purchase.

APPLICABILITY AND LIMITATIONS: This warranty is applicable only to units retained within the Fifty States of the U.S.A., District of Columbia, and Canada. This warranty is not applicable to:

1. Air filters or fuses.
2. Products on which the model and serial numbers have been removed.
3. Products which have defects or damage which results from improper installation, wiring, electrical current characteristics, or maintenance; or caused by accident, misuse or abuse, fire, flood, alterations and/or misapplication of the product and/or units installed in a corrosive atmosphere, default or delay in performance caused by war, government restrictions or restraints, strikes, material shortages beyond the control of FRIEDRICH, or acts of God.

OBTAINING WARRANTY PERFORMANCE: Service will be provided by the **FRIEDRICH Authorized Dealer or Service Organization** in your area. They are listed in the Yellow Pages. If assistance is required in obtaining warranty performance, write to: Room Air Conditioner Service Manager, Friedrich Air Conditioning Co., P.O. Box 1540, San Antonio, TX 78295-1540.

LIMITATIONS: THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES. A nything in the warranty notwithstanding, ANY IMPLIED WARRANTIES OF FITNESS FOR PARTICULAR PURPOSE AND/OR MERCHANTABILITY SHALL BE LIMITED TO THE DURATION OF THIS EXPRESS WARRANTY. MANUFACTURER EXPRESSLY DISCLAIMS AND EXCLUDES ANY LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTY.

Performance of Friedrich's Warranty obligation is limited to one of the following methods:

1. Repair of the unit
2. A refund to the customer for the prorated value of the unit based upon the remaining warranty period of the unit.
3. Providing a replacement unit of equal value

The method of fulfillment of the warranty obligation is at the sole discretion of Friedrich Air Conditioning.

NOTE: Some states do not allow limitations on how long an implied warranty lasts, or do not allow the limitation or exclusion of consequential or incidental damages, so the foregoing exclusions and limitations may not apply to you.

OTHER: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

PROOF OF PURCHASE: Owner must provide proof of purchase in order to receive any warranty related services.

All service calls for explaining the operation of this product will be the sole responsibility of the consumer.

All warranty service must be provided by an **Authorized FRIEDRICH Service Agency**, unless authorized by FRIEDRICH prior to repairs being made.

(11-09)